



## INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

# Combined Sewer Overflow

[www.idem.IN.gov](http://www.idem.IN.gov)

*Mitchell E. Daniels, Jr.*

**Governor**

*Thomas W. Easterly*

**Commissioner**

100 North Senate Avenue, Mail Code 65-42, Indianapolis, IN 46204

Phone: (317) 232-8670

Toll Free: (800) 451-6027

### **Description:**

- A Combined Sewer System (CSS) is a type of sewer designed to collect rainwater runoff, domestic sewage and industrial wastewater in the same pipe.
- CSSs transport all of their wastewater to a treatment plant where it is treated then discharged into a water body.
- During heavy storms or snowmelts, the capacity of the CSS can be exceeded, causing it to overflow.
- This overflow allows the untreated human and industrial waste materials and debris to be discharged directly into nearby streams, rivers and other water bodies without treatment.

### **Environmental Impacts:**

- U.S. Environmental Protection Agency (U.S. EPA) reports that combined sewer overflows (CSOs) are a problem for approximately 772 communities nationwide.
- Most of these communities are located in the Northeast and Great Lakes regions.
- In Indiana, CSOs are a major water polluter for 108 communities, many of which are located in Northern Indiana.
- Surface waters in these communities are affected by the overflow of untreated domestic sewage, industrial wastewaters and storm water runoff.
- This overflow often contains high levels of suspended solids, pathogenic microorganisms, toxic pollutants, oxygen-demanding organic compounds, oil, grease, trash and other pollutants.
- The presence of these materials in local water bodies can trigger the exceedance of water quality standards, leading to risks for human health, aquatic life, aquatic habitats and limit public enjoyment of waterways.

### **IDEM's Role:**

- The Indiana Department of Environmental Management (IDEM) is responsible for protecting human health and the environment while providing for safe industrial, agricultural, commercial, and governmental operations vital to a prosperous economy.
- In 1989, the U.S. EPA established a national CSO strategy, which was then updated in 1994. The Indiana Department of Environmental Management (IDEM) includes U.S. EPA's four fundamental principles in its state plans to ensure that CSO controls are cost effective and meet local environmental needs:
  1. Establish clear levels of control to meet health and environmental standards.
  2. Flexibility to consider the site-specific nature of CSOs and find the most cost-effective way to control them.
  3. Phased implementation of CSO controls to accommodate a community's financial capability.
  4. Review and revision of water quality standards during the development of CSO control plans to reflect the site-specific wet weather impacts of CSOs on water usage.

- U.S. EPA's 1989 plan included nine technology-based controls to be implemented by January 1, 1997. These "nine minimum controls" are measures that can reduce the prevalence and impacts of CSOs and that are not expected to require significant engineering studies or major construction.
- IDEM has been working closely with the U.S. EPA and local communities to establish long-term control plans (LTCPs) to help diminish the effects of CSOs on Indiana's waterways using U.S. EPA's LTCP minimum requirements:
  1. Characterization, monitoring and modeling of the combined sewer system.
  2. Public participation.
  3. Consideration of sensitive areas.
  4. Evaluation of alternatives to meet Clean Water Act requirements using either the presumption or demonstration approach.
  5. Cost/performance considerations.
  6. Operational plan.
  7. Maximizing treatment at the existing Publicly Owned Treatment Works treatment plant.
  8. Implementation schedule.
  9. Post-construction compliance monitoring program.
- All LTCPs must be in an enforceable document such as a permit, an Agreed Order, federal consent decree or a state judicial agreement.
- In developing an LTCP, some communities have chosen to separate formerly combined sewer systems, some have put in separate CSO treatment facilities, some have put in holding tanks to store the CSO flow until it can be put back into the system when the flow has subsided, some have expanded their wastewater treatment plants while some have employed a combination of these options.
- Of the 108 affected communities in Indiana, nine had approved CSO controls prior to January 10, 2005. U.S. EPA is also working on consent decree negotiations with several communities separately from IDEM's LTCP initiative.
- To effectively implement LTCPs in the remaining communities, IDEM has established a series of tiered goals including the following:
  1. By September 2007, IDEM will have an enforceable document incorporating LTCP approval or a workplan for an approvable LTCP for the top 51 prioritized communities. This goal was completed on time by all 51 communities.
  2. By September 2008, IDEM will complete the same goal for an additional 10 affected communities. To date, 7 of the 10 communities have met this goal, with the remaining 3 to be completed by the deadline.
  3. By September 2009, the last 22 affected communities will have an enforceable document incorporating LTCP approval or a workplan for an approvable LTCP. To date, 6 of the 22 communities have met this goal.
- The first LTCP was approved by IDEM in 2005 in Michigan City.

#### **Citizen's Role:**

- Citizen involvement has been and will continue to be a vital component of the effort to reduce the effects of CSOs on Indiana's waterways.
- Within their communities, citizens are encouraged to take part in public meetings about CSOs and review proposed LTCPs.

#### **More Information:**

- For more Information, contact IDEM's Office of Water Quality at (317) 232-8670 or visit IDEM's Web site at <http://www.in.gov/idem/4897.htm>.

